

## Study of Antibacterial Susceptibility Pattern of Biofilm Producing *Acinetobacter Baumannii* Against Ciprofloxacin

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**Background & Objectives:** Biofilms are highly structured communities of bacteria attached to a surface that recognized as a common cause of human infection. *Acinetobacter baumannii* biofilms has emerged worldwide as an important nosocomial infecting factor that is difficult to treat because of its multiple antibiotic resistance. Until 1988, quinolones had good activity against *Acinetobacter* strains. However, resistance to these antibiotics has developed rapidly in clinical isolates. This study presents the lowest concentration of ciprofloxacin that can inhibit the biofilm formation by *Acinetobacter baumannii* isolates.

**Methods:** 75 isolates from burn wounds and catheters was evaluated for biofilm formation ability according to Srdjan Stepanović et al, (1999) in Tehran. MICs were determined by a broth microdilution methods which 100 µl of each bacterial were added to each well containing 100 µl ciprofloxacin with different dilutions. plates were incubated 24h at 37°C.

**Results:** Results showed that 19% of isolates can form strong biofilms, 11% moderate biofilms, 48% week biofilms, and 22% are non-biofilm forming isolates. The lowest concentration of ciprofloxacin that inhibit biofilm formation for 69 isolates were higher than 4 µg/ml and for 5 isolates were lower than 1 µg/ml and for 1 isolate was 2 µg/ml.

**Conclusion:** In conclusion, the results presented in this study demonstrated the high prevalence of biofilm formation by *A. baumannii* isolates, validate the importance of biofilms in nosocomial infections, and the potential of high concentrations of ciprofloxacin (128≥) to inhibit attachment and biofilm production by *Acinetobacter baumannii* isolates on abiotic surfaces.

**Keywords:** Antibacterial; *Acinetobacter*; Ciprofloxacin